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The enduring and evolving influence of Ball and Brown (1968)

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Abstract

Background In this virtual special issue (VSI) we acknowledge the contribution of Ball and Brown (1968) [BB68] and select some key papers from the Australian Journal of Management (AJM), published since its inception in 1976, that demonstrate how Ball and Brown influenced, and in many cases inspired, the research agendas of Australian and New Zealand researchers. AJM is particularly proud to acknowledge the connection with Ray Ball and Philip Brown. Not only did these scholars strongly influence the research agenda of AJM authors but Ray and Philip were both instrumental in the establishment and development of the Journal. The Australian Graduate School of Management (AGSM), Sydney, launched AJM in 1976 with the aim to publish scholarly articles in the interdisciplinary field of management. Philip Brown was the first Director of AGSM and Ray Ball was one of the foundation faculty of AGSM and the founding editor of AJM...

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Ray Ball and Philip Brown have had an ongoing influence in Australian universities through leadership positions, mentoring and co-authoring with Australian academics and of course through their publications. Ball and Brown have published a total of twenty-three papers in AJM either together, individually or with other coauthors. We celebrate their contribution to the discipline in this golden anniversary year of BB68 through this virtual issue.

The biography of Philip Brown, published by the Australian Accounting Hall of Fame, quotes Brown in his comments on the BB68 seminal paper:

"We had looked at the relevance of earnings data and the timeliness of announcements. These two ideas of timeliness and relevance have been central in the accounting research literature ever since."[1]

Ball & Brown (2014) explore their journey to the 1968 publication and provide an overview of the subsequent literature. Guided by the themes in Ball & Brown (2014), we reviewed all papers ever published in AJM and identified an initial pool of 58 papers that we considered to be influenced by BB68. All 58 papers can be classified as analysing accounting/auditing information impact, timeliness of accounting information and/or adopting an event study approach. However, we further classify in terms of specialty subject areas. Table 1 provides a summary of these classifications and the number of papers identified and year of publication. Drawing on google citation data, we selected 18 papers that are relatively well cited and represent research across the specialty subject areas and decades. We exclude papers with Ball or Brown as a co-author as we wish to focus on their broader influence on other research in the antipodean region. Table 2 shows the list of the papers selected for this virtual issue informed by the subject area as identified in Table 1. A brief overview for each category of papers is presented below.

Accounting Information, Disclosure, International Financial Reporting Standards (IFRS) and Audit

The papers in this virtual special issue that have addressed questions concerning **accounting** information, disclosure, IFRS or audit were published both in early issues of Australian Journal of Management following BB68 and in later issues of AJM following the adoption of IFRS in Australia. Although these papers cover a diverse range of topics, the research questions are built on the contributions of BB68: through either its findings, its assumptions and/or its measurement metrics.

[1] https://fbe.unimelb.edu.au/accounting/caip/aahof/ceremonies/philip_brown

The earlier group of papers tend to cite BB68, whereas the later papers do not, so much has BB68 become ingrained in the capital markets research tradition.

Some of the accounting assumptions of BB68 are confirmed by Watts (1977) and by Caird and Emanuel (1981), specifically that managers do not play a role in the informativeness of financial statements, and that earnings follow a random walk. Watts (1977) is a theoretical paper contributing a set of propositions about the production of financial statements, leading to a theory of financial statements. Like BB68, Watts assumes that financial statements are useful, but he focuses on how they serve the needs of preparers in contrast to BB68's focus on how they serve the needs of users. Caird and Emanuel (1981) conduct serial correlation and run tests on several accounting summary measures for New Zealand companies, confirming the random walk hypothesis for these measures, and documenting no evidence of mean reversion. Their analysis accords with BB68's finding that earnings are an accurate reflection of firm performance, in contrast to the view that earnings are managed.

Some of the measurement metrics of BB68 are addressed by Ohlson (1978), Shevlin (1981) and Chalmers et al. (2011). In particular, the papers in this virtual special issue have queried the Abnormal Performance Index (API) metric, the way that share market responses are modelled, and whether accounting information is better proxied by earnings or book value in the post-IFRS period. Ohlson (1978) conducts a theoretical and econometric analysis of BB68's API metric, concluding that APIs are not a good measure of market efficiency. He critiques the post BB68 use of APIs for equilibrium analysis, and highlights that APIs are reliant on CAPM, and that APIs do not provide a useful measure of differences between markets. Shevlin (1981) is a replication of Brown and Warner (1980), testing various models of share market responses to information releases. Chalmers et al. (2011) studies the value relevance of accounting information in Australia during the pre- and post-IFRS periods, using an event study approach. They find that in the post-IFRS period, the value relevance of earnings has increased whereas the value relevance of book value has declined.

Papers in this issue that address the accounting-related findings of BB68 include Bettman (2007) and Chang et al. (2008). These studies add to the knowledge base of BB68 by showing the role of other information in supplementing earnings information, and the role of earnings forecasts in providing information to the market. Bettman (2007) uses a version of the Ohlson 1995 model to evaluate the value relevance of technical information in Australia, over and above fundamental measures. Both are shown to be value relevant, with technical information subsuming earnings information. Chang et al. assesses the effect of disclosure quality on the bid-ask spread. The paper finds that higher quality disclosures substitute for investor searches, showing how other information is acquired by the market. The findings of these papers are consistent with BB68 showing that earnings are an accurate but not timely summary of performance information already known to the share market. Extending this finding to the news of a qualified audit report, Shevlin and Whittred (1984) report comparable findings to BB68: controlling for the sign of unexpected earnings, the market reflects new information contained in the qualified audit report over the 12 months prior to the announcement.

Earnings and Governance

Three papers in this virtual issue examine some characteristic of firm earnings, where: Whittred (1978) examine its time series behaviour; Sin and Watts (2000) study the information content of losses and Govendir and Wells (2014) assess the effect of accruals on earnings persistence. Whittred (1978) shows that, consistent with the evidence in other countries (for example, Beaver 1970 and Ball and Watts, 1972), earnings changes in relatively large Australian firms follows a random walk. Interestingly, in these early papers the process of generating earnings is not well specified and the random walk model provides the most efficient forecast of earnings. Sin and Watts (2000) explore another aspect of the returns-earnings relation, finding that losses experienced by Australian firms have lower association with returns, due to shareholder expectation of earnings reversals. Govendir and Wells (2014) extend our understanding of how accounting information is incorporated into share price by its disaggregation into accruals and cash flows, via the Sloan (1996) accruals anomaly framework. Using a four-way categorisation (whether underlying cash flows lead or lag earnings recognition and whether accruals are initiating or reversing), they report that lagged cash flows and initiating accruals have higher earnings persistence. These papers, published from 1978 to 2014, demonstrate the enduring interest in better understanding the process of earnings generation and its eventual incorporation into share price.

The influence of governance on firm earnings is the motivation for Gray, Harymawan and Nowland (2016). The market reaction to the announcement of directors political or government connections is examined. In contrast to emerging economies where directors' political and government connections are reported to be value relevant, these effects are mostly immaterial to shareholders in Australian firms. Using the BB68 event study method, this paper highlights how governance affects the expectation of future earnings, via market reaction to new director announcements.

Takeovers, Divesture and Buybacks

Dodd (1976) was the first paper in what has proven to be a rich vein of research published in the A*JM* related to the wealth effects surrounding company takeovers and restructuring. This particular research flowed from Peter Dodd's Master of Commerce thesis at University of New South Wales, under the supervision of Ray Ball. Following a successful takeover, synergistic benefits are expected to accrue to the amalgamated firm (for example, by way of economies of scale, reduced competition, tax considerations, elimination of inefficient management). Accordingly, whereas BB68 examines the wealth effects to shareholders surrounding earnings announcements, Dodd (1976) explores the behaviour of abnormal returns to offeror and offeree firms surrounding the announcement of a takeover. He finds that offeror firms generate significant positive abnormal returns prior to the takeover announcement, consistent with the notion that these firms have excess funds which they are looking to invest. In the event of an unsuccessful bid, offerors experience a sharp negative abnormal return in the following month. Curiously, negative post-takeover abnormal returns to successful bidders extend out to 24 months. Firms subject to the takeover bid demonstrate relatively poor performance over the 2 years preceding the offer, but jump sharply during the short 3-month window preceding the date of the offer. Further, offerees generate +25% abnormal returns in the month of the announcement – clear evidence that a takeover offer is good news for the offeree shareholders. In the event that the bid was ultimately unsuccessful, offerees experience negative abnormal returns for several months. Overall, Dodd's (1976) research suggests that any gains arising from a takeover accrue to the offeree at the expense of the offeror.

Building on the research agenda initiated by Dodd (1976), Walter (1984) extends the analysis to better understand the reasons for the observed returns to offerors and offerees, with particular reference to the implications of the findings for the efficient market hypothesis. Utilising a larger sample of takeovers and higher-frequency weekly returns, Walter (1984) shows that, after a period of normal to below-normal returns, the sharp positive returns to offerees in the immediate pre-announcement period are partly attributable to the entry of competing bidders. Consistent with the market responding quickly and (near) fully to the information content of a takeover bid, most of the gains to offeree shareholders accrue in the announcement week, with little drift in the extended post-announcement period. Like Dodd (1976), Walter documents that offerors experience strong positive performance preceding the takeover bid. In the event that the bid is successful, there is little discernible evidence of abnormal post-announcement returns (consistent with an efficient reaction to the news). However, in sharp contrast to Dodd's (1976) finding, unsuccessful bidders do not experience subsequent under performance. Further sub-category analysis suggests that the puzzle presented by Dodd (1976) is partly attributable to a selection bias resulting from data availability.

With the literature having established that a takeover announcement brings important value-relevant information for the prospects of bidders and targets, da Silva Rosa, Izan, Steinbeck and Walter (2000) drill down to a deeper level by studying whether the medium of exchange (cash or shares) itself conveys unique information. Theory suggests that cash offers: (i) send a credible signal that the bidder's shares are undervalued, and (ii) indicate that the bidder's expected payoff is high. As da Silva Rosa et al. (2000) note, the Australian market for corporate control facilitates a pure test of these information hypotheses because the tax liability incurred by target shareholders is independent of the method of payment. The empirical findings suggest that abnormal returns over the bid announcement period are not significantly associated with the medium of exchange. Over the longer post-bid horizon, bidders who offered shares significantly underperform, consistent with the notion that a share bid signals that under this scenario the bidder's shares are overvalued.

A closely-related strand of literature also posits that value is created on the divestiture of business units. With the advent of daily data, Cooney, Finn and Karl (2004) undertake an event study using a short window surrounding the announcement of a voluntary sell off. They document significant positive abnormal returns over the 2-day post-announcement window [0, +1]. Cooney et al. (2004) then proceed to test competing theories of the source of these gains. Only divestitures that have a clear strategic motivation (i.e., selling off a unit unrelated to the firm's core activities) generate significant positive abnormal returns. Further, a clearly-stated intention to use the sale proceeds for strategic purposes also carries greater information content and generates higher gains.

Brown (2007) studies price and volume effects of the information inherent in off-market share repurchases. Whereas international studies endeavour to disentangle competing explanations based around information signalling and tax, the Australian dividend imputation system offers a unique environment to investigate tax-related announcement effects. Since a large portion of the buyback price can be designated as a fully-franked dividend, shareholders are often willing to sell their shares at a discount to market price. This neutralises the common explanation that management engage in buybacks at a premium to signal undervaluation, thereby allowing Brown (2007) to isolate the extent to which taxes influence the market reaction to buyback announcements. She finds significant positive abnormal returns and abnormal trading volume on the days immediately following the announcement, consistent with a strong temporary tax-based demand from superannuation funds.

Arguably, a virtual issue of an Australian journal would not be complete without a paper that analyses the mining firms. Using cumulative abnormal returns (CARs) How (2000) assesses the performance of mining IPOs. In contrast to industrial firms, the mining sector has higher average initial returns on IPOs and do not underperform the market in the long-run.

Conclusion

The papers we feature in the virtual issue demonstrate the substantial and enduring influence of Ray Ball and Philip Brown, in their thought leadership on the relation between information and prices, and the application of appropriate research methods. We trust that this BB68 50th anniversary issue allows a timely pause and reflection on the evolution of this field of study and promotes continuing fruitful developments in capital markets research for many decades to come.

References

Ball R and Brown P (1968) An empirical evaluation of accounting income numbers. *Journal of Accounting Research* 6(2): 159-178.

Ball R and Brown P (2014) Ball and Brown (1968): A Retrospective. *The Accounting Review* 89(1): 1-26.

Ball R and Watts R (1972) Some time series properties of accounting income. *The Journal of Finance* 27(3): 663-681

Bettman JL (2007) Australian evidence regarding the value-relevance of technical information. *Australian Journal of Management* 32(1): 57-71

Beaver W (1970) The times series behaviour of earnings. *Journal of Accounting Research* 8(suppl): 62-99.

Brown C (2007) The announcement effects of off-market share repurchases in Australia. *Australian Journal of Management* 32(2): 369-385

Brown SJ and Warner JB(1980) Measuring security price performance. *Journal of Finance Economics* 8: 205-258

Caird KG and Emanuel DM (1981) Some time series properties of accounting income numbers. *Australian Journal of Management* 9(2): 7-16.

Chalmers K, Clinch G and Godfrey JM (2011) Changes in value relevance of accounting information upon IRFS adoption: Evidence from Australia. *Australian Journal of Management* 36(2): 151-173.

Chang M, D'Anna G, Watson I, and Wee M (2008) Does disclosure quality via investor relations affect information asymmetry? *Australian Journal of Management* 33(2): 375-390.

Cooney M, Finn FJ, and Karl A (2004) Australian divestiture activity: An examination of gains to sell-off announcements. *Australian Journal of Management* 29(1_suppl): 135-151.

da Silva Rosa R, Izan HY, Steibeck A, and Walter T (2000) The method of payment decision in Australian takeovers: An investigation of causes and effects. *Australian Journal of Management* 25(1): 67-94.

Dodd P (1976) Company takeovers and the Australian equity market. *Australian Journal of Management* 1(2): 15-35.

Govendir B and Wells P (2014) The influence of the accruals generating process on earnings persistence. *Australian Journal of Management* 39(4): 593-614.

Gray S, Harymawan I and Nowland J (2016) Political and government connections on corporate boards in Australia: Good for business? *Australian Journal of Management*. 41(1): 3-26.

How JCY (2000) Initial and long-run performance of mining IPOs in Australia. *Australian Journal of Management* 25(1): 95-118.

Ohlson JA (1978) On the theory of residual analyses and abnormal performance metrics. *Australian Journal of Management.* 3(2): 175-193.

Shevlin T and Whittred G (1984) Audit qualifications and share prices: Further evidence. *Australian Journal of Management* 9(1):37-52.

Shevlin TJ (1981) Measuring abnormal performance on the Australian equity market. *Australian Journal of Management* 6(1): 67-108.

Sin S and Watts E (2000) The information content of losses: Shareholder liquidation option and earnings reversals. *Australian Journal of Management* 25(3): 327-338.

Sloan RG (1996) Do stock prices fully reflect information in accruals and cash flows about future earnings? *The Accounting Review* 71(3): 289-315.

Walter TJ (1984) Australian takeovers: Capital market efficiency and shareholder risk and return. *Australian Journal of Management* 9(1): 63-118.

Watts RL (1977) Corporate financial statements, a product of the market and political processes. *Australian Journal of Management* 2(1): 53-75.

Whittred GP (1978) The time series behaviour of corporate earnings. *Australian Journal of Management* 3(2): 195-202

Table 1 Summary of AJM Papers Influenced by Ball and Brown (1968)

This table shows the publication year for 58 papers, categorised in key subject areas, that capture the spirit of Ball and Brown (1968).

Broad Topic	Number of papers	Years of publication
Accounting variables, disclosure, financial statement impact (including IFRS)	14	1977, 1978, 1978, 1981, 1981, 1982, 2007, 2008, 2011, 2012, 2013, 2014, 2014, 2017
Earnings	5	1978, 2000, 2008, 2014, 2016
Analyst forecasts	4	2008, 2012, 2012, 2014
Audit	1	1984
Dividends	4	1977, 1979, 1993, 2016
Share capitalisation/buybacks/rights	5	1977, 1979, 1987, 2001, 2008
Takeovers and acquisitions	18	1976, 1984, 1985, 1987, 1987, 1991, 1994, 1998, 2000, 2003, 2004, 2004, 2004, 2004, 2005, 2007, 2012, 2015
IPOs	2	2001, 2011
Mining	2	2000, 2013
Divestiture	1	2004
Governance	2	2011, 2016
Total number of papers	58	

Table 2: Listing of Virtual Special Issue Papers

This table lists the 18 papers selected for this virtual issue. The papers are categorised by subject area.

Author/s	Year	Title
Panel A: Accounting information, Disclosure, IFRS and Audit		
Watts, R.L.	1977	Corporate financial statements, a product of the market and political processes
Ohlson, J.A.	1978	On the theory of residual analyses and abnormal performance metrics
Caird, K.G., and D.M. Emanuel	1981	Some time series properties of accounting income numbers
Shevlin, T.J.	1981	Measuring abnormal performance on the Australian equity market
Chalmers, K., Clinch, G., and J.M. Godfrey	2011	Changes in value relevance of accounting information upon IRFS adoption: Evidence from Australia
Bettman, J.L.	2007	Australian evidence regarding the value-relevance of technical information
Chang, M., D'Anna, G., Watson, I., and M. Wee	2008	Does disclosure quality via investor relations affect information asymmetry?
Shevlin, T., and G. Whittred	1984	Audit qualifications and share prices: Further evidence
Panel B: Earnings and Governance		
Whittred, G.P.	1978	The time series behaviour of corporate earnings
Sin, S., and E. Watts	2000	The information content of losses: Shareholder liquidation option and earnings reversals
Govendir, B., and P. Wells	2014	The influence of the accruals generating process on earnings persistence
Gray, S., Harymawan, I., and J. Nowland	2016	Political and government connections on corporate boards in Australia: Good for business?
Panel C: Takeovers, Divesture and IPOS		
Dodd, P.	1976	Company takeovers and the Australian equity market
Walter, T.J.	1984	Australian takeovers: Capital market efficiency and shareholder risk and return
da Silva Rosa, R., Izan, H.Y., Steibeck, A., and T. Walter	2000	The method of payment decision in Australian takeovers: An investigation of causes and effects
Brown, C.	2007	The announcement effects of off-market share repurchases in Australia
Cooney, M., Finn, F.J., and A. Karl	2004	Australian divestiture activity: An examination of gains to sell-off announcements
How, J.C.Y.	2000	Initial and long-run performance of mining IPOs in Australia